SCOPE TRACKING - ADDITIONAL WORK (TAW) - 16220 SDD108A; 4Q2011 4 CRUDE MAJOR-EASTSIDE

Scope Greep Type Late (Deliverables supplied late) Cancel (cancel existing job after WL Frz) TAW Pre-ER Discovery Scope Reduction Pre-ER Scope Addition Pre-ER Date: WO Nbr: 10/26/2011 238172 Originator: BEAUREGARD, JOHN (tbea) RI T/A Interval (Mos): ER Submission Date:	 TAW Post-ER Discovery Scope Reduction Post-ER Scope Addition Post-ER Work Deferral Other (work done outside of Remarks: approved MRG 10/28 System No: Equip / Loc: (D) P-114 	Engineering Required Yes No Environmental Review Yes No Risk Assessment?
Description of work: (Include Options)	Д	
BE-102-E9 / P-1148 discharge gate valve Replace discharge valve Information: P-1148 8 inch gate valve gasket mating surface is misa Chevron maintenance team to believe we could start up similar valve required a routine maintenance following th to the current valve on P-1148. DED INSTRUCTIONS: SEE ATTACHED WORK INSTRUCTIONS Justification for this TAW we are replaceing the piping at this location and this is a down the road. P-1148 discharge valve will likely requir in plant inspection.	with bonnent issues on this valve nermal shock while switching purn a good opportunity to replace this	e. The bonnent on the P-1148A gate valve the ps on the run. This valve was in similar condition valve. We will save ourselves time and money
Reason work was identified after work list free	ze or late:	Work List Freeze Date:
during discovery		
Schedule Status (for use by schedulers):		
Current Estimates: Labor \$0 ER Contingency: Material \$0 TAW Estimates at ER Cre Equip. \$0 Current TAW Estimate: Total: \$0 TAW \$ Approved to Date: Remaining Contingency: Planning Notes:	\$1,549,373 \$1,549,373 \$0	Effect on Schedule ✓ None ☐ Risk, Miss Planning Milestone ☐ Risk, number of non-critical path jobs ☐ Potential critical path ☐ New critical path ☐ Extends Schedule by 0
		Impacts Budget? O Yes

10/28/2011 10:50:59 AM

SCOPE TRACKING - ADDITIONAL WORK (TAW) - 16220 SDD108A; 4Q2011 4 CRUDE MAJOR-EASTSIDE

Approvals: Select Added Work Classification and Type To Show Required Approvals...

10/26/2011 1:32:00 PM

Entered By: TBEA

	Req?	? Core Team Members:	Status	Date:	NOT SUE	MITTED
Operations:	Y	CRUZ, ALFRED (acrz) RI	16/28/11	1/24)	W	
Technical:	ĨΥ	MURPHY, PAT (pmgr) RI	10/28/11	143.7	MIN	
Inspection:	Y	BEAUREGARD, JOHN (tbea) RI	1 30/28/2001	(A)	127	
Maint Core Team Lead	ŢΥ	MASSARO, VINCENT (vrma) RI	1924/U	THOS	67.	
		Management Approvals:				
Impact Team Leader.	Υ	GREENFIELD, MATTHEW (mgcv) RI	10128/11	, <i>==</i>		
TA Superintendent	N	3				
Section Head	N					
Area Business Mgr.	N					
Mgr Of Operations:	N					
.3.6.5.66.64.76.66.674.38666	Comr	nent ATTACHED AND GIVEN TO IMPACT		UserEnters		RI
				*		
				支		

R. RAMIREZ0CT **28** 2011

Last Updated By: PMGR

10/28/2011 10:50:52 AM

10/28/2011 10:51:00 AM

4Q/11 4CU S/D EWO# BE-102-E9-Rev-0

4CRU - P-1148 Discharge Gate Valve Replacement - 8

Page 1 of 1

1.0 SCOPE

A Gate Valve on the discharge side of P-1148 needs to be replaced. This EWO provides specific work direction for this valve.

2.0 GENERAL REQUIREMENTS

All work in this EWO shall be in strict compliance with the following ASME Codes and Richmond Refinery standards:

- ASME Section VIII (latest): _____Pressure Vessel Code
- NBIC (latest): ______National Board Inspection Code
- ASME Section IX (latest): ______Welding and Brazing Qualifications
- ASME Section V (latest):
 Nondestructive Examination
- All piping work in this EWO shall be in compliance with the "<u>Richmond Refinery Metals Craft Manual</u>". The piping Contractor is responsible for complying with these quality assurance procedures.
- Any repair alternatives to the instructions in this EWO shall be reviewed and approved by a Chevron Designs Engineer.

3.0 MATERIALS

- Obtain Valves from MR# 238172
- All other materials to be supplied by Maintenance and/or the Contractor

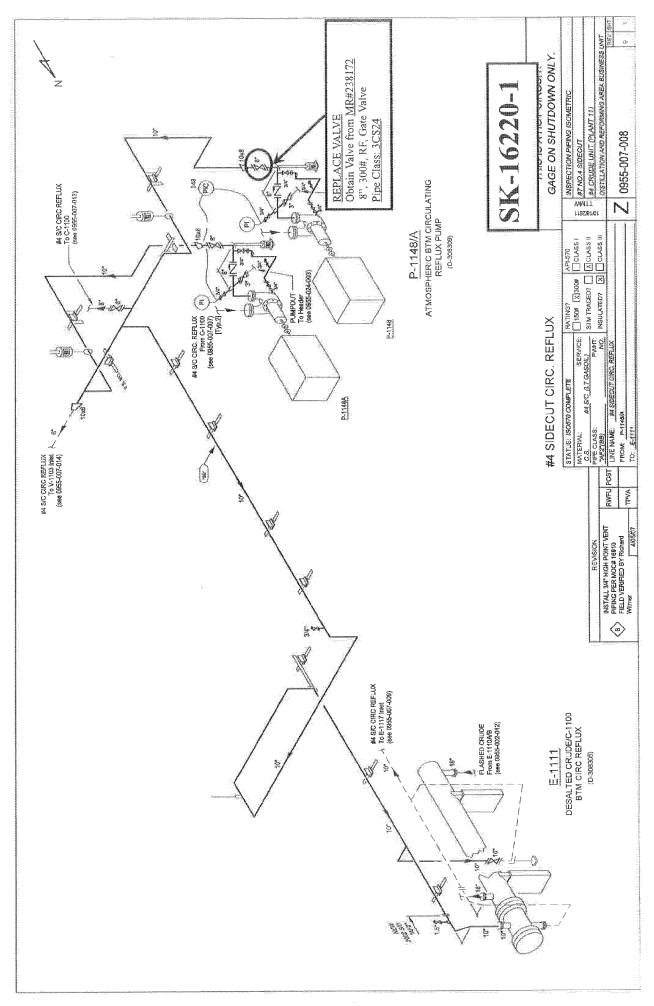
4.0 WORK INSTRUCTIONS

See SK-16220-1 for Work Instructions

5.0 ATTACHMENTS

THE CONTRACTOR ASSESSMENT OF THE CONTRACTOR A	<u>Dwg No</u>	Sheets
Individual Valve Sketches	SK-16220-1	
Piping Classification:	3CS24	3

EPA



LIMITED BY:

Flanges

SERVICE: RATING CLASS: Process

MATERIAL: DESIGN CODE: Carbon Steel

TEMPERATURE LIMIT:

Min. to 750F

STRESS RELIEF:

ASME B31,3-2008 NONE

NOMINAL CORROSION ALLOWANCE:

0.125 in. (0.100 in. MIN)

EXAMINATION:

5% RT, PT & Visual

VALVE TRIM:

API Trim #8 (13CR & HF)

300 RF, ASME B16.5-2009

*LIMITATIONS: Pressure limits for steels in hydrogen service. See Note 302.

PRESSURE - T	TEMPERATURE RA	TINGS	NOTE: HY	DROTEST @				
TEMP F	Min. to 100	200	300	400	500	600	700	750
psig	740	675	655	635	600 (280)*	550 (65)*	535 (50)*	505 (50)*
ТЕМР С	Min. to 38	93	149	204	260	316	371	399
kPag	5100	4655	4515	4380	4135	3795	3690	3480

For NPS 3/4 through NPS 24 (Full flange ratings per ASME B16.5, Table 2-1.1.)

MINIMUM TEMPERATURE (see Note 300)										
SIZE:	34" - 16"	18"	20"	24"						
°F:	-20	÷7	-2	+9						
°C:	-29	-21	-19	-12						

ITEM	NOTES	NPS	SCH/RAT	ENDS	DESCRIPTION	ITEM CODE
PIPE	20					
		3/4 - 1 - 1/2	160	PE	CS, SMLS, ASTM A106-B	LIILAIB
		2-3	XS	BE	CS, SMLS, ASTM A106-B	LIINA2A
		4 – 10	STD WT	BE	CS, SMLS, ASTM A106-B	L11MA2A
		12 – 24	40	BE	CS, SMLS, ASTM A106-B	L11EA2A
NIPPLES	03, 20					
Branch		3/4 - 1-1/2	160	PE	CS, SMLS, ASTM A106-B	L34LAEJ
Branch		3/4 - 1 - 1/2	XXS	TOE-POE	CS, SMLS, ASTM A106-B	L34PAHJ
Swage (CONC)		3/4 - 1 - 1/2	160	BBE	CS, ASTM A234-WPB-S, MSS SP-95	L55LA1VA
Swage (CONC)		3/4 - 1-1/2	XXS	BLE-TSE	CS, ASTM A234-WPB-S, MSS SP-95	L35PBMQ
FITTINGS	,					
Sockolet		3/4 - 1 - 1/2	Class 6000	sw	CS, ASTM A105, MSS SP-97	L36VBDT
Thredolet	03	3/4 - 1 - 1/2	Class 6000	THRD	CS, ASTM A105, MSS SP-97	L36VBAT
SW Elbolet		3/4 - 1 - 1/2	Class 6000	sw	CS, ASTM A105	L36VBDU
Latrolet	92	3/4 - 1 - 1/2	160	Weld	CS, ASTM A105	L56LA1K
Weldolet	05	3/4 - 1 - 1/2	160	Weld	CS, ASTM A105, MSS SP-97	L56LA1H
90 ELL		3/4 - 1 - 1/2	Class 6000	SW	CS, ASTM A105, ASME B16.11	L30VBDB
45 ELL		3/4 - 1 - 1/2	Class 6000	sw	CS, ASTM A105, ASME B16.11	L30VBDA
Tee		3/4 - 1 - 1/2	Class 6000	SW	CS, ASTM A105, ASME B16.11	L31VBD
Tee	03	3/4 - 1 - 1/2	Class 6000	THRD	CS, ASTM A105, ASME B16.11	L31VBA
Tee (RED)		3/4 - 1 - 1/2	Class 6000	sw	CS, ASTM A105, ASME B16.11	L31VBDD
Plug	03	3/4 - 1 - 1/2		THRD	CS, ASTM A105, round head, ASME B16.11	L370ABW
Plug		3/4 - 1 - 1/2		PE	CS, ASTM A105, round head, ASME B16.11	L370AEW
Coupling		3/4 1-1/2	Class 6000	sw	CS, ASTM A105, ASME B16.11	L34VBDH
Cap		3/4 - 1 - 1/2	Class 6000	sw	CS, ASTM A105, ASME B16.11	L37VBDX
Reducer (CONC)		2 - 3	XS	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L55NA1DA
Reducer (ECC)		2 - 3	XS	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L55NA1DB
Weldolet	05	2 – 3	XS	Weld	CS, ASTM A105, MSS SP-97	L56NA1H
90 LR ELL		2 – 3	XS	Weld	CS, ASTM-A234-WPB-S, ASME B16.9	L50NA1BC
45 LR ELL		2 – 3	XS	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L50NA1AC
Tee		2 - 3	XS	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L51NA1
Tee (RED)		2 - 3	XS	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L51NA1D
Cap		2 – 3	XS	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L57NA1R
Reducer (CONC)		4 – 10	STD WT	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L55MA1DA
Reducer (ECC)		4-10	STD WT	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L55MA1DB
Weldolet	05	4 8	STD WT	Weld	CS, ASTM A105, MSS SP-97	L56MA1H
90 LR ELL		4 – 10	STD WT	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L50MA1BC
45 LR ELL		4 10	STD WT	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L50MA1AC
Tee		4 – 10	STD WT	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L51MA1
Tee (RED)		4 – 10	STD WT	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L51MA1D

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Chevron USA Inc. 3CS24

ITEM	NOTES	NPS	SCH/RAT	ENDS	DESCRIPTION	ITEM CODE
Cap		4 - 10	STD WT	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L57MAIR
Reducer (CONC)		12 - 24	40	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L55EA1DA
Reducer (ECC)		12 - 24	40	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L55EAIDB
90 LR ELL		12 - 24	40	Weld	CS, ASTM A234-WPB-S, ASME B16,9	L50EA1BC
45 LR ELL		12 - 24	40	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L50EA1AC
Tee		12 - 24	40	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L51EA1
Tee (RED)		12 - 24	40	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L51EAID
Cap		12 - 24	40	Weld	CS, ASTM A234-WPB-S, ASME B16.9	L57EAIR
VALVES			44-44	SALSEL SALAMANANANANANANANANANANANANANANANANANAN		
Gate	67	1/2 - 1/2	Class 800	MSW/FSW	CS body, API #8 trim, BB, RP, EXTD BDY	L20KAXHDM
Gate	15	3/4 - 1-1/2	Class 300	RF	CS body, API #8 trim, BB, RP	L20FA3DD
Gate	06	3/4 - 1-1/2	Class 800	T/SW	CS body, API #8 trim, BB, RP	L20KA7DD
Gate		3/4 - 1-1/2	Class 800	sw	CS body, API #8 trim, BB, RP	L20KAIDD
Gate	325	3/4 - 1-1/2	Class 800	SW	CS body, API #8 trim, BB, FP	L20KA1DD
Gate	161	3/4 - 1-1/2	Class 800	T/SW	CS body, API #8 trim, BELLOW SEAL, BB, RP	L20KA7DDL
Gate	161	3/4 ~ 1-1/2	Class 800	sw	CS body, API #8 trim, BELLOW SEAL, BB, RP	L20KA1DDL
Gate	161,325	3/4 - 1-1/2	Class 800	sw	CS body, API #8 trim, BELLOW SEAL, BB, FP	L20KA1DDL
Gate	06	3/4 - 1-1/2	Class 800	MSW/FNPT	CS body, API #8 trim, BB, RP, EXTD BDY	L20KAYHDM
Gate	00	2 - 6	Class 300	RF	CS body, API #8 trim, BB, FP	L20FA3DD
Gate		8 - 24	Class 300	RF	CS body, API #8 trim, BB, FP, GO	L20FA3DDF
Globe	161, 307	3/4 - 1-1/2	Class 800	SW	CS body, API #8 trim, BELLOW SEAL, WB	L21KA1JEL
Globe	307	3/4 - 1-1/2	Class 800	sw	CS body, API #8 trim, BB	L2IKA1DE
Globe	307	2 - 2	Class 300	RF	CS body, API #8 trim, BB	L21FA3DE
Globe	307	3 - 8	Class 300	RF	CS body, API #8 trim, BB, GO	L21FA3DEB
Check	61,328	3/4 - 1-1/2	Class 800	sw	CS body, API #8 trim, BC, piston, HORIZ	L22KA1TEF
Check	62,328	2-24	Class 300	RF	CS body, API #8 trim, BC, Swing	L22FA3PE
Check	62,328	2 - 24	Class 300	RF	CS body, API #8 trim, Dual Plate	L22FA3LEH
Ball	26, 101, 164	2 - 12	Class 300	R.F	CS, body T3 MOD, Orbit H8 seat	L25FB3FD
Ball		2 - 12	Class 300	RF	CS, body T3 MOD, Orbit H seat	L25FB3FF
Butterfly	26, 63, 101 101	2 - 12	Class 300	RF	CS body, 316 SS trim, Flg, Triple Offset GO	L26FA3TJM
FLANGES	02	2 - 29	Class Juu	KG.	CS dody, 310 BS tilli, 11g, 11tpte Offset GO	1 1201 177 17111
Socket Weld	02	3/4 - 1-1/2	Class 300	RF	CS, ASTM A105, ASME B16.5, 160 Bore	L40FA3BL
Blind		3/4 - 1-1/2	Class 300	RF	CS, ASTM A105, ASME B16.5	L43FA3
Blind Spectacle		3/4 - 14	Class 300	RF	CS, ASTM A516-70, ASME B16.48	L45FA3E
Spacer Ring		16 – 24	Class 300	RF	CS, ASTM A516-70, ASME B16.48	L45FA3FZ
Blind Plate		16 – 24	Class 300	RF	CS, ASTM A516-70, ASME B16.48	L45FA3GZ
Weld Neck		2 - 3	Class 300	RF	CS, ASTM A105, ASME B16.5, XS Bore	L40FA3DN
		2 – 3 4 – 10	Class 300	RF	CS, ASTM A105, ASME B16.5, STD WT Bore	L40FA3DM
Weld Neck Weld Neck		12 – 24	Class 300	RF	CS, ASTM A105, ASME B16.5, 40 Bore	L40FA3DE
Pair WN Orifice		2 - 3	Class 300 Class 300	RF	CS, ASTM A103, ASME B16.3, 40 Bore CS, ASTM A105, ASME B16.36, ½ SW taps, XS Bore	L42FA3DNL
Pair WN Orifice		4 - 10	Class 300	RF	CS, ASTM A105, ASME B16.36, ½ SW taps, X5 B0fe	L42FA3DML
Pair WIN Offlice		4-10	Class 500	Kr	Bore	DAZIASDINIL
Pair WN Orifice	17	12 – 18	Class 300	RF	CS, ASTM A105, ASME B16.36, 1/2 SW taps, 40 Bore	L42FA3DEL
GASKETS				1000		
		3/4 - 24	Class 300	RF	Spiral wound type 316L SS w/ flexible Inhibited	L61FF1CAC
					Graphite filler, ASME B16.20, w/inner ring.	
	301	3/4 – 24	Class 300		KAM style, 316LSS w/APX-2 Graphite, EXH-SU-5151	L61FF1ZA
BOLTING						
Stud Bolts	310	3/4 - 24			ASTM A193, Gr B7 stud w/ 2 heavy hex nuts ASTM	L620BM
		3/4 – 24			A194, Gr 2H ASTM A193, Gr B16 stud w/ 2 heavy hex nuts ASTM	L620CM
Stud Bolts	311					

Chevron USA Inc. 3CS24

90° BRANCH CONNECTION, Legend and Chart

	24	Т															
	20	E	Т														
1	18	E	Ε	T													
	16	Е	E	Ε	Т		6										
	14	E	E	Ε	E	Т	<u> </u>										
1 6	12	E	E	E	E	E	T		į.								
	10	E	E	Ε	Ē	E	E	1.									
	8	W	Ε	E	E	E	E	E	T								
В	6	W	W	W	E	E	E	E	E	T							
R	4	: W :	W	W	W ::	W	W	E	E	Е	T	i de la constanta de la consta					
A	3	W	W	W	W	W	W	W	E	E	E	T		a*			
N	2	W	W	W	W	W	W	W	W	W	E	E	T		4:		
	1-1/2	S	S	S	S	S	S	S	S	: 8	8	S	. S	Т			
C	1	S	S	S	S	S	S	S	S	S	S	S	S	E	T		-
H	3/4	S	S	S	S	5	S	S	S	S	S	S	S	E	Е	Т	
	1/2	S	S	S	S	S	5	- 5	-5	S	.S	S	S	E	E	E	T
		24	20	18	16	14	12	-10	- 8	6	4	3	2	1-1/2	1	3/4	1/2

				H	£	A	D	E	R		S	1	\mathbf{z}	E			

- E Reducing Tee
- P Branch Weld w/ Reinforcing Pad (Pad thickness equals run pipe thickness. Pad width equals 1/2 branch OD.)
- T Equal Tee
- S Sockolet
- W Weldolet (Note 05)

NOTES:

- 03 THREADED JOINTS ARE PERMITTED ONLY AT OUTLET OF VENT AND DRAIN VALVES, AT HYDROSTATIC CONNECTIONS, AT OUTLET OF INSTRUMENT TAKE-OFF VALVES, AND TO MATCH EQUIPMENT.
- 05 INTEGRALLY REINFORCED BRANCH CONNECTIONS ARE PERMITTED OUTSIDE THE SIZES SHOWN IN THE BRANCH CONNECTION TABLE. DESIGNER SHALL CHECK WELD THICKNESS OF INTEGRALLY REINFORCED CONNECTIONS TO DETERMINE IF PWHT IS REQUIRED.
- 06 THESE VALVES SHALL BE USED FOR VENT, DRAIN AND INSTRUMENT CONNECTIONS ONLY.
- 09 PRESSURE AND TEMPERATURE RATING MAY BE LIMITED BY CERTAIN COMPONENTS PERMITTED BY THIS SPECIFICATION. REFER TO MANUFACTURER'S RECOMMENDED PRESSURE-TEMPERATURE RESTRICTIONS.
- 15 TO BE USED WHEN MATING TO FLANGED NOZZLES.
- 20 SCH XXS PIPE AND PIPE NIPPLES SHALL BE USED FOR THREADED CONNECTIONS FOR SIZES NPS 1/2 1-1/2.
- 26 TO BE USED ONLY WHEN INDICATED ON THE P&ID.
- 61 INSTALL IN HORIZONTAL POSITION WITH COVER UP.
- 62 INSTALL IN HORIZONTAL POSITION WITH COVER UP OR IN VERTICAL POSITION WITH UPWARD FLOW.
- 300 FOR PIPING SYSTEM MAWP LOWER THAN PIPE CLASS MAX. PRESSURE, SEE FIG. 323.2.2B IN ASME B31.3 FOR REDUCTION IN MINIMUM DESIGN METAL TEMPERATURE.
- 301 FOR USE IN VOC REGULATED SERVICES; IN FLANGES WITH SLIGHTLY DAMAGED GASKET SEATING FACES; OR IN FLANGES WITH A HISTORY OF LEAKING.
- 302 MAXIMUM HYDROGEN PARTIAL PRESSURE FOR STEELS IN HYDROGEN SERVICE. PRESSURE LIMITS ARE BASED ON FIGURE 1 IN API 941 WITH A REQUIRED SAFETY FACTOR OF -50°F (-10°F) AND -50 PSI (-345 KPA).
- 307 LIMITED TO THROTTLING SERVICES UP TO 150 PSI DIFFÉRENTIAL PRESSURE. FOR SERVICE APPLICATIONS WITH DIFFÉRENTIAL PRESSURES GREATER THAN 150 PSI, CONSULT WITH THE VALVE MANUFACTURER AND CHEVRON PIPING & VALVE SME FOR SUITABILITY.
- 310 ASME A193/SA193 GR, B7 STUD BOLTING IS LIMITED TO PROCESS SERVICE TEMPERATURES NOT GREATER THAN 700°F TO AVOID THERMAL FATIGUE CRACKING.
- 311 ASME A193/SA193 GR. B16 STUD BOLTING SHOULD BE USED IN ALL PROCESS SERVICES WITH TEMPERATURES GREATER THAN 700°F. FLANGES SHOULD NOT BE INSULATED AT PROCESS SERVICE TEMPERATURES ABOVE 850°F TO AVOID THERMAL FATIGUE CRACKING. AT TEMPERATURES GREATER THAN 850°F, WEATHER SHIELDS OVER FLANGES ARE ACCEPTABLE.
- 325 USE FULL PORT VALVES IN LOCATIONS REQUIRING FULL OPENINGS SUCH AS UPSTREAM AND DOWNSTREAM OF RELIEF VALVES OR IN HORIZONTAL LINES CONTAINING HAZARDOUS LIQUIDS.
- 328 SIZING AND LOCATION OF CHECK VALVES IS CRITICAL FOR RELIABLE OPERATION. SEE SECTION 6.0 (25) IN THE GENERAL SPECIFICATION FOR MORE INFORMATION.
- 17 USE WELD NECK FLANGES AND THROAT TAPS NPS 20 INCH AND LARGER
- 63 ORBIT VALVE WITH TYPE "H" SEATS LIMITED TO 500F.
- 67 USE RESTRICTED ORIFICE FLANGE TAP CONNECTIONS. THREADED NIPPLES TO BE SEAL WELDED. NIPPLE LENGTHS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING D-601407.
- 92 USE RESTRICTED TO THERMOWELL ASSEMBLIES.
- 101 TO BE USED WHERE TIGHT SHUT-OFF IS REQUIRED.
- 161 USE BELLOW SEAL GATE VALVES FOR ALL IN-KIND REPLACEMENT ONLY. INSTALL NEW BELLOW SEALVALVES WHEN REQUIRED BY PROJECT FOR PERMIT PURPOSES.
- 164 USE ORBIT VALVES WITH T7 (CORROSIVE) TRIM & TYPE h8 SEAT IN 500 F TO 650 F TEMP RANGE.

SERVICE:

- HC Liquid Gas & Vapor (Corrosive)
- HC Liquid Gas & Vapor (Corrosive) w/ Trace H2S
- LPG (Corrosive) & LPG w/ Trace H2S
- LPG w/HC Mixtures (Corrosive)
- LPG w/HC Mixtures (Corrosive) w/ Trace H2S
- H2 & H2/HC to 450F (232C)
- H2 & H2/HC w/ Trace H2S to 450F (232C)

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